

ENVIRONMENTAL STEWARDSHIP PLAN FOR MANAGEMENT OF LEAD/BULLETS

Lansing Rod and Gun Club

55 Salmon Creek Road
Lansing, New York 14882

533-7711

12/28/2016

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Introduction

The Lansing Rod and Gun Club ("LRGC" or the "Club") is located at 55 Salmon Creek Road in the Town of Lansing, New York.

Mission Statement of Club

The mission of the Lansing Rod and Gun Club is to promote conservation and environmental stewardship and to enhance the knowledge, skill, and enjoyment of those engaged in fishing, hunting and shooting sports by:

- providing education and training
- providing safe facilities and responsible practices
- promoting fellowship and good sportsmanship
- protecting, preserving, conserving and enhancing our natural resources for the members, the community, and future generations, both by collective personal action, and through education of people of all ages, but especially of our youth.

Description of Club Activities

The private facility is located on one hundred thirteen acres in a wooded valley traversed by a stream, Salmon Creek, in the Town of Lansing, New York, which operation is currently supported by approximately one hundred fifty members. Among other amenities, it boasts a cabin clubhouse and outdoor pavilion, which are outfitted with complete kitchen facilities that have the capability to (and regularly do) serve and accommodate an occupancy of approximately four hundred people. This ample space and related amenities are used for the hosting of a variety of Club events along with community and charitable activities.

Among other things, the Club has hosted the following events:

- Sportsman Show (200 attendees);
- corporate clam bakes (up to 400 attendees/event);
- fundraising events and benefits hosted by community members in support of each other (i.e., generating thousands of dollars for cancer victims and their families);
- benefits which supports the American Cancer Society;
- a weekly community breakfast (serving on average 50 residents);
- No-fee Hunter Education courses taught by Club members, who are NYSDEC-certified instructors (educating at least 50 students every year);
- food preparation and donation to an area retirement home facility (serving 50 elderly residents);
- shooting events and leagues with other neighboring clubs (5-10 neighboring clubs/leagues);
- annual pancake breakfast on the opening day of fishing season (approximately 100 people served);
- other recreational activities such as horseshoe leagues;
- as a registered Amateur Trapshooting Association organization, the Club conducts multiple registered events each year (approximately 100 people/event);

The Club also funds an annual scholarship that is awarded to a Lansing High School Senior who is a conservation major.

The Club has also participated in pheasant raising and release, fish rearing and stocking, and a variety of other conservation and wildlife-related activities and programs.

By selecting programs and associated activities in support of its mission statement, the Club plays an important and fundamental role in shaping the future of the shooting sports community, all while seeking to be a positive environmental force as it evolves and advances.

Plan Purpose

The purpose of this Environmental Stewardship Plan is to:

- Identify, evaluate, and prioritize appropriate actions to manage lead shot and bullets safely, as well as identifying and addressing environmental concerns;
- Develop short and long term action items and steps needed for implementation;
- Develop an implementation schedule;
- Identify ways to measure the Plan's success;
- Evaluate annual progress made towards achieving environmental stewardship goals; and
- Identify additional ways to mitigate and minimize any potentially adverse effect on the environment and surrounding ecosystem.

Plan Goal

The Goal of this Environmental Stewardship Plan is to minimize and mitigate any potential release of lead into the environment.

The Activities and Actions identified to reach this goal are as follows:

- Continued exploration of ways to mitigate and minimize the likely shot zone(s) by re-orienting the shooting fields, installing shot curtains, and examining other ways to avoid shooting over and into water and wetlands;
- Identifying the feasibility and schedule for conducting lead recycling, recovery and/or removal programs;
- Discouraging any potential ingestion of lead by wildlife; and
- Maintaining soil pH between 6.5 and 8.5 in the shot-fall zone.

Site Assessment

Existing Environmental Conditions

The Club is located on approximately one hundred thirteen acres of land in Lansing, New York (Tompkins County). The property is bisected by a Town Road (Salmon Creek Road) and by a New York State Regulated Stream (Salmon Creek). The Topography is generally flat in the area of the improved Club facilities and ranges, then steepens along the stream valley walls to the Club's boundaries. (See Figure 1)

A FEMA designated 100-year floodplain runs parallel with the stream and incorporates a National Wetlands Inventory wetland described as PFO1a (Freshwater Forested/Shrub Wetland – 3.46 acres) and PEM1a (Freshwater Emergent Wetland - .57 acres). The Stream is classified as C(ts) by the New York State Department of Environmental Conservation. (See Figure 2 & Figure 3)

Soils within the site are made up of Eel Silt Loam, Alluvial land and Genesee Silty Loam. The alluvial soils have a high water table especially near the creek and are typically moderately acid. The Eel and Genesee Silt Loams are deep well drained soils that have a neutral to slightly alkaline pH. (see Figure 5, Figure 6, and Figure 7)

Salmon Creek runs through two community parks, Ludlowville Park and Myers Park, before terminating into the larger receiving body at its mouth at Cayuga Lake. The Club has been in operation at this site since the late 1950's (See Figure 4). Residential development pressure has increased slightly near the Club but not to the point of excess.

Although the Club continues to explore its options, and would prefer to reorient the shooting fields, there appears to be very limited space for realignment of the trap fields from their current location. Any relocation of the trap fields would require a level topography and a buffer/barrier from existing water courses and wetland areas, in addition to maintaining safe shooting distances from existing structures and dwellings.

Description of Range and Support Facilities

There are currently two trap fields to the East of the main club house (See Figure 8). These fields are currently oriented toward Salmon Creek and a high eroding bank beyond the creek. The fields comply with ATA regulations that are required for registered events that are held annually at the Club. The ranges are covered with perennial grasses and sit over Alluvial and Eel Silt Loam soils.

The Club also has a rifle and handgun range on the opposite side of Salmon Creek to the North (See Figure 9, Figure 10). This range sits generally over a Genesee Silt Loam soil. The orientation of these ranges are at a skewed angle to Salmon Creek. The Handgun range shoots into a berm that is well away from any watercourses or wetlands.

Trap Fields

Action Plan

Option A: Keep Current Fields and Install Shot Curtain(s)

This option involves the installation of one or more shot curtains to mitigate any potential lead shot dispersal in the area of Salmon Creek. Lead shot fabrics and curtain systems have been used for these purposes (Kim, Yong K. and Lewis, Armand F.). The Club is in the process of determining logistics, locations and related information for implementation of this option, including putting up curtains at the end zone B as seen in Figure 16. This option would catch shot within the curtain allowing it to fall into a collection area for lead remediation. Zone B has been initially recommended by the curtain manufacturers to allow for a 5-7 year life span of the curtains. However, due to the proximity of Salmon Creek, the location of such curtain(s) is still under review.

Option B: Relocate/Reorient Trap Fields to North Side of Salmon Creek

This option involves moving Trap Fields 1 and 2 (as seen in Figure 8) to the North side of and across Salmon Creek (see Figure 11). A Lead Reclamation Plan would be implemented within the shot zone of the relocated ranges. Shooting would be directed away from any wetlands and waterbodies, and away from any structures and dwellings/roadways. The relocated fields must be in compliance with ATA regulations. The Club will also explore a soil testing program within the shotfall zones of the ranges. Grass will be frequently mowed within shotfall zone.

This option would also require the relocation of the Rifle and Handgun Ranges. The Rifle Range could be repositioned as seen in Figure 13. The Handgun Range could be repositioned as seen in Figure 12. As an additional mitigation measure, bullet traps could be installed to capture lead and a reclamation plan developed.

Option C: Cease all Lead Shot Activities

This option is not feasible given the Club's mission, goals and purpose.

Option D: Close Facility

This option is not reasonable or appropriate given the Club's mission, goals and purpose, not to mention the impact upon its members and the community in general. Every reasonable alternative will be explored by the Club to avoid closure.

Selection of Management Option

The Club has selected Option B and is currently exploring the logistics in doing a relocation. Unless the Club hears from EPA to the contrary, it will be moving forward with the following actions:

a.) Management Actions

- Assign a committee to begin site layout for new trap fields and obtain any necessary local permits;
- Conduct an RFP process to obtain quotes for work;
- Conduct public meetings to share alternatives and progress with the general public; and
- Revise its Environmental Stewardship Plan as needed.

b.) Operational Actions

- Seek guidance from NRCS/Soil and Water Conservation District for sediment and erosional controls and vegetation mixes; and
- Hire contractor.

c.) Construction Actions

- Relocate old trap fields to area North of Salmon Creek;
- Relocate old rifle/handgun ranges to area South of Salmon Creek;
- Create site plans for layout of new trap fields and rifle/handgun ranges; and
- Commence excavation and site work to implement planned relocations.

Plan Implementation

Schedule for Implementation

- Spring/Summer 2017: Create site plans, explore permit requirements, obtain permits and approvals, and hire contractor.
Summer/Fall 2017: Begin relocation of new fields/ranges, run electricity to new houses, do any vegetation clearing as necessary.
- Fall/Winter 2017: Finalize relocation, plant vegetation and grasses, revise and implement related mitigation plans.

Responsibilities

The President and Vice President of the Club will oversee projects and hire contractor and related professionals. Club membership will provide labor for projects.

Measuring Success (Future Documentation)

By monitoring the success of the Plan, the Club is best prepared to make whatever changes may be necessary to reinforce success and to make the most of its environmental stewardship efforts. Below are some examples of areas to monitor.

Lead Recovery:

The Club will document the quantity in pounds of lead recovered and recycled, along with the cost of conducting the activity. Record keeping documents will be maintained .

Vegetation:

The density of vegetative growth will be monitored by taking periodic photographs/images.

Wildlife:

The Club will keep a log of wildlife seen in the area.

Soil and Runoff pH:

The Club will track soil pH and runoff through periodic monitoring and apply or adjust the amount of lime applied to designated areas to maintain a pH level in the range of 6.5 to 8.5. .

Erosion:

The Club will keep a photographic record of any problem areas located on its property and take maintenance measures where and when appropriate.

Plan Review and Revision

The Club will review the Plan on an annual basis. Updates to the Plan will be made when and where appropriate and needed actions scheduled. Records will be kept for future Club officers and board members as reference for consideration when reviewing the Plan on an annual basis.

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Figure 1. Overview Map

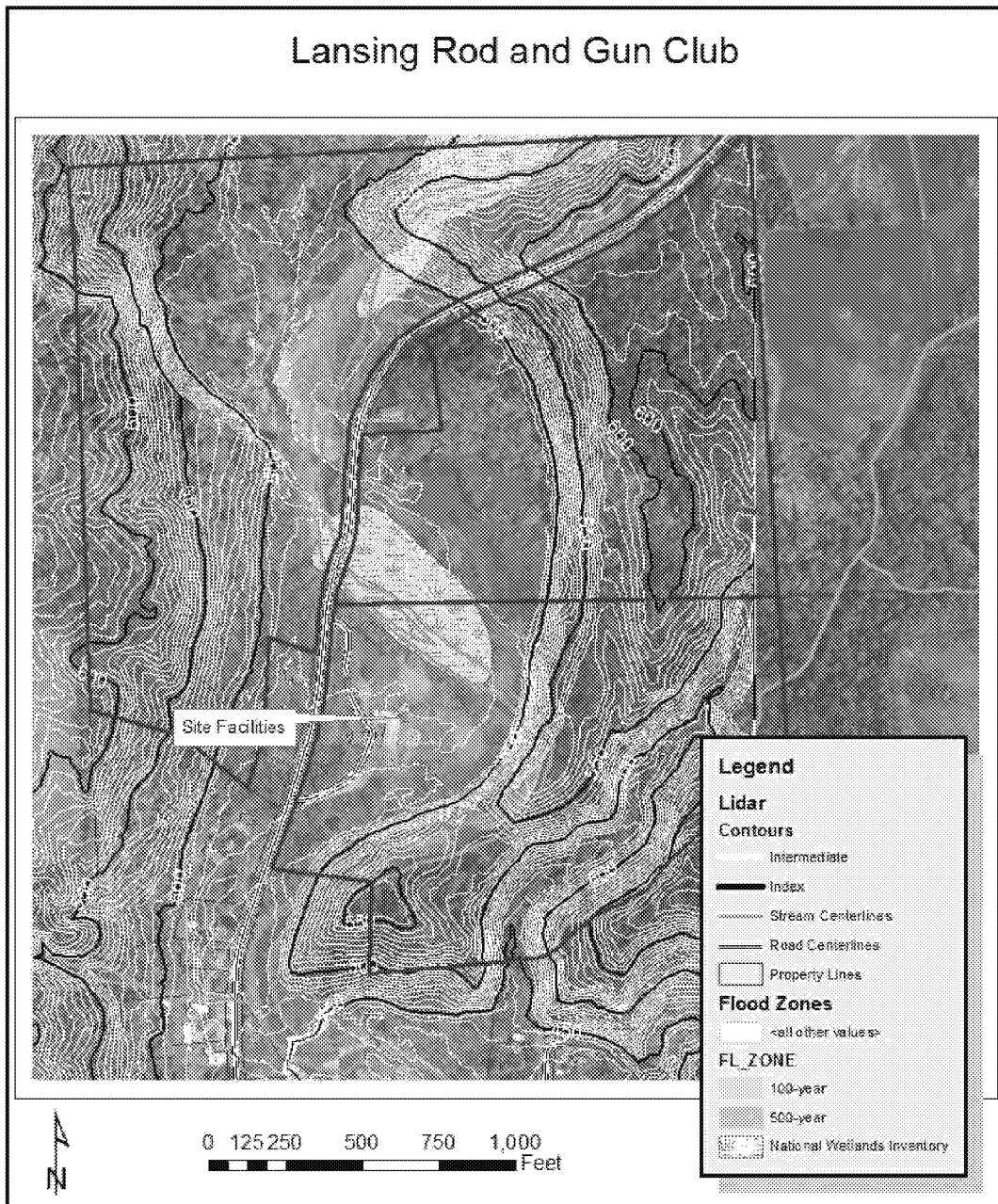


Figure 2. Regulated Streams/Wetlands Map

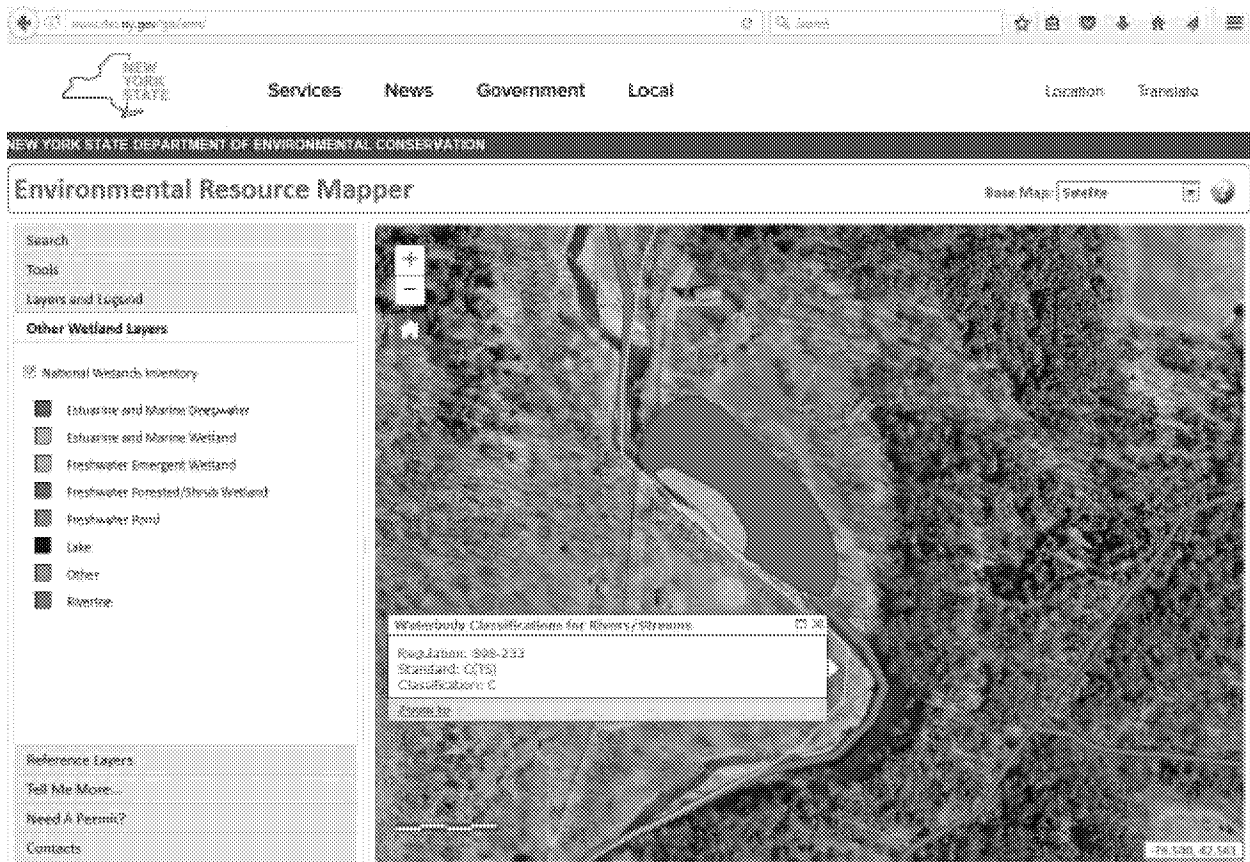


Figure 3. FEMA Floodplain Map

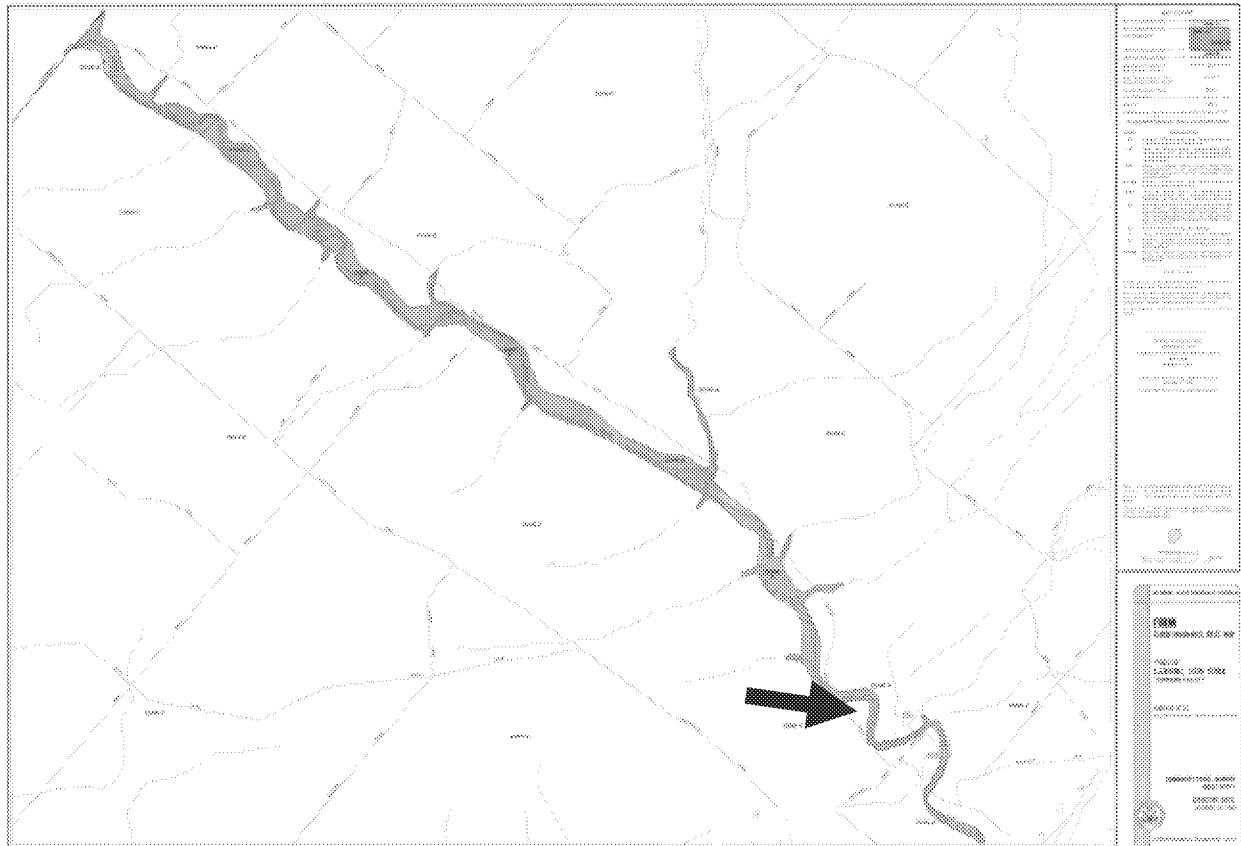


Figure 4. 1964 Historical Aerial Photo



Figure 5. Soils Map

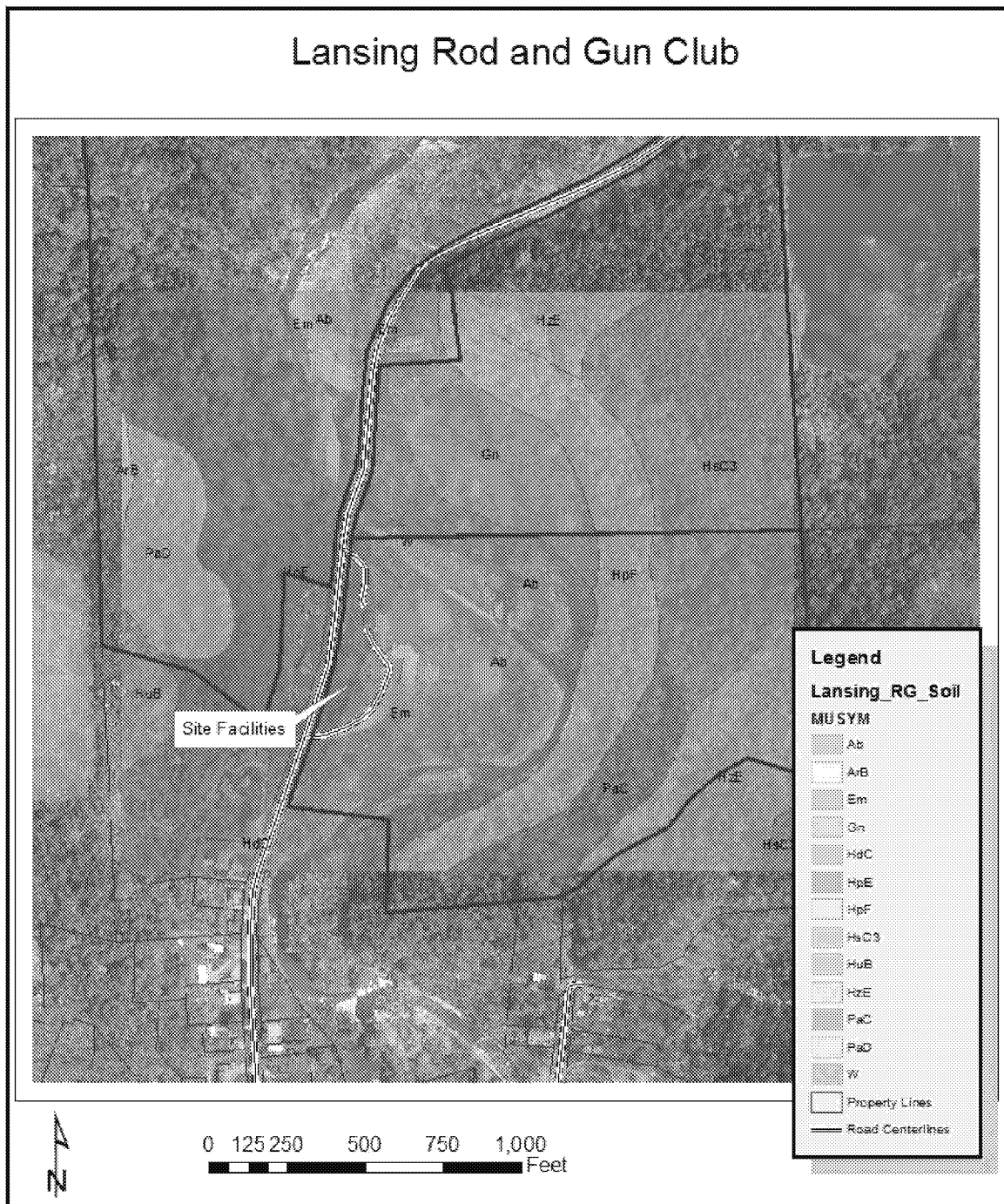


Figure 6. Soils Descriptions

Brief Map Unit Description

Tompkins County, New York

[Only those map units that have entries for the selected description categories are included in this report]

Map unit: Ab - Alluvial land

Description category: NASIS

Ab = Alluvial land

Fluvaquents-- This soil is very deep and poorly drained. Slopes range from 0 to 2 percent. The parent material consists of alluvium with highly variable texture. Depth to the top of a seasonal high water table is 0 inches. Annual flooding is frequent. Annual ponding is frequent. Shrink-swell potential is low. Available water capacity is moderate. The Kf erodibility factor assigned to the top mineral soil layer is .32 and the soil loss tolerance factor T is not assigned.

Hydrologic group: D

Farmland class: not prime farmland

Hydric soil rating: yes

Land capability classification: 5w

Udfluvents-- This soil is very deep and moderately well drained. Slopes range from 0 to 5 percent. The parent material consists of alluvium with a wide range of texture. Depth to the top of a seasonal high water table ranges from 34 to 72 inches. Annual flooding is frequent. Shrink-swell potential is low. Available water capacity is moderate. The Kf erodibility factor assigned to the top mineral soil layer is .28 and the soil loss tolerance factor T is not assigned.

Hydrologic group: B

Farmland class: not prime farmland

Hydric soil rating: no

Land capability classification: 5w

Map unit: ArB - Arkport fine sandy loam, 2 to 6 percent slopes

Description category: NASIS

ArB = Arkport fine sandy loam, 2 to 6 percent slopes

This soil is very deep and well drained. The parent material consists of glaciofluvial or deltaic deposits with a high content of fine and very fine sand. Depth to the top of a seasonal high water table is greater than 60 inches. Shrink-swell potential is low. Available water capacity is moderate. The Kf erodibility factor assigned to the top mineral soil layer is .28 and the soil loss tolerance factor T is 5.

Hydrologic group: B

Farmland class: prime farmland

Hydric soil rating: no

Land capability classification: 2e

Map unit: Em - Eel silt loam

Description category: NASIS

Em = Eel silt loam

This soil is very deep and moderately well drained. Slopes range from 0 to 2 percent. The parent material consists of silty alluvium. Depth to the top of a seasonal high water table ranges from 18 to 24 inches. Annual flooding is occasional. Shrink-swell potential is low. Available water capacity is high. The Kf erodibility factor assigned to the top mineral soil layer is .43 and the soil loss tolerance factor T is 5.

Hydrologic group: B

Farmland class: prime farmland

Hydric soil rating: no

Land capability classification: 2w

Brief Map Unit Description

Tompkins County, New York

Map unit: Gn - Genesee silt loam

Description category: NASIS

Gn = Genesee silt loam

This soil is very deep and well drained. Slopes range from 0 to 2 percent. The parent material consists of silty alluvium. Depth to the top of a seasonal high water table ranges from 36 to 60 inches. Annual flooding is occasional. Shrink-swell potential is low. Available water capacity is high. The Kf erodibility factor assigned to the top mineral soil layer is .43 and the soil loss tolerance factor T is 5.

Hydrologic group: B

Farmland class: prime farmland

Hydric soil rating: no

Land capability classification: 1

Map unit: HdC - Howard gravelly loam, 5 to 15 percent simple slopes

Description category: NASIS

HdC = Howard gravelly loam, 5 to 15 percent simple slopes

This soil is very deep and well drained. The parent material consists of gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, containing significant amounts of limestone. Depth to the top of a seasonal high water table is greater than 60 inches. Shrink-swell potential is low. Available water capacity is moderate. The Kf erodibility factor assigned to the top mineral soil layer is .28 and the soil loss tolerance factor T is 3.

Hydrologic group: A

Farmland class: farmland of statewide importance

Hydric soil rating: no

Land capability classification: 3e

Map unit: HpE - Howard and Palmyra soils, 25 to 35 percent slopes

Description category: NASIS

HpE = Howard and Palmyra soils, 25 to 35 percent slopes

Howard— This soil is very deep and well drained. The parent material consists of gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, containing significant amounts of limestone. Depth to the top of a seasonal high water table is greater than 60 inches. Shrink-swell potential is low. Available water capacity is moderate. The Kf erodibility factor assigned to the top mineral soil layer is .28 and the soil loss tolerance factor T is 3.

Hydrologic group: A

Farmland class: not prime farmland

Hydric soil rating: no

Land capability classification: 5e

Palmyra— This soil is very deep and well drained. The parent material consists of loamy over sandy and gravelly glaciofluvial deposits, derived mainly from limestone and other sedimentary rocks. Depth to the top of a seasonal high water table is greater than 60 inches. Shrink-swell potential is low. Available water capacity is moderate. The Kf erodibility factor assigned to the top mineral soil layer is .28 and the soil loss tolerance factor T is 3.

Hydrologic group: B

Farmland class: not prime farmland

Hydric soil rating: no

Land capability classification: 5e

Brief Map Unit Description

Tompkins County, New York

Map unit: HpF - Howard and Palmyra soils, 35 to 60 percent slopes

Description category: NASIS

HpF = Howard and Palmyra soils, 35 to 60 percent slopes

Howard— This soil is very deep and well drained. The parent material consists of gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, containing significant amounts of limestone. Depth to the top of a seasonal high water table is greater than 60 inches. Shrink-swell potential is low. Available water capacity is moderate. The Kf erodibility factor assigned to the top mineral soil layer is .28 and the soil loss tolerance factor T is 3.

Hydrologic group: A

Farmland class: not prime farmland

Hydric soil rating: no

Land capability classification: 7e

Palmyra— This soil is very deep and well drained. The parent material consists of loamy over sandy and gravelly glaciofluvial deposits, derived mainly from limestone and other sedimentary rocks. Depth to the top of a seasonal high water table is greater than 60 inches. Shrink-swell potential is low. Available water capacity is moderate. The Kf erodibility factor assigned to the top mineral soil layer is .28 and the soil loss tolerance factor T is 3.

Hydrologic group: B

Farmland class: not prime farmland

Hydric soil rating: no

Land capability classification: 7e

Map unit: HsC3 - Hudson silty clay loam, 6 to 12 percent slopes, eroded

Description category: NASIS

HsC3 = Hudson silty clay loam, 6 to 12 percent slopes, eroded

This soil is very deep and moderately well drained. The parent material consists of clayey and silty glaciolacustrine deposits. Depth to the top of a seasonal high water table ranges from 18 to 24 inches. Shrink-swell potential is moderate. Available water capacity is high. The Kf erodibility factor assigned to the top mineral soil layer is .49 and the soil loss tolerance factor T is 2.

Hydrologic group: C

Farmland class: not prime farmland

Hydric soil rating: no

Land capability classification: 4e

Map unit: HuB - Hudson-Cayuga silt loams, 2 to 6 percent slopes

Description category: NASIS

HuB = Hudson-Cayuga silt loams, 2 to 6 percent slopes

Hudson— This soil is very deep and moderately well drained. The parent material consists of clayey and silty glaciolacustrine deposits. Depth to the top of a seasonal high water table ranges from 18 to 24 inches. Shrink-swell potential is moderate. Available water capacity is high. The Kf erodibility factor assigned to the top mineral soil layer is .49 and the soil loss tolerance factor T is 3.

Hydrologic group: C

Farmland class: prime farmland

Hydric soil rating: no

Land capability classification: 2e

Cayuga— This soil is very deep and moderately well drained. The parent material consists of clayey glaciolacustrine deposits over loamy till derived from limestone, dolomite, sandstone, or shale. Depth to the top of a seasonal high water table ranges from 13 to 24 inches. Shrink-swell potential is low. Available water capacity is high. The Kf erodibility factor assigned to the top mineral soil layer is .49 and the soil loss tolerance factor T is 3.

Hydrologic group: C

Farmland class: prime farmland

Hydric soil rating: no

Land capability classification: 2e

Brief Map Unit Description

Tompkins County, New York

Map unit: HzE - Hudson and Dunkirk soils, 20 to 45 percent slopes

Description category: NASIS

HzE = Hudson and Dunkirk soils, 20 to 45 percent slopes

Dunkirk— This soil is very deep and well drained. The parent material consists of silty and clayey glaciolacustrine deposits. Depth to the top of a seasonal high water table is greater than 60 inches. Shrink-swell potential is low. Available water capacity is high. The Kf erodibility factor assigned to the top mineral soil layer is .49 and the soil loss tolerance factor T is 4.

Hydrologic group: B

Farmland class: not prime farmland

Hydric soil rating: no

Land capability classification: 6e

Hudson— This soil is very deep and moderately well drained. The parent material consists of clayey and silty glaciolacustrine deposits. Depth to the top of a seasonal high water table ranges from 18 to 24 inches. Shrink-swell potential is moderate. Available water capacity is high. The Kf erodibility factor assigned to the top mineral soil layer is .49 and the soil loss tolerance factor T is 3.

Hydrologic group: C

Farmland class: not prime farmland

Hydric soil rating: no

Land capability classification: 6e

Map unit: PaC - Palmyra gravelly loam, 5 to 15 percent simple slopes

Description category: NASIS

PaC = Palmyra gravelly loam, 5 to 15 percent simple slopes

This soil is very deep and well drained. The parent material consists of loamy over sandy and gravelly glacioluvial deposits, derived mainly from limestone and other sedimentary rocks. Depth to the top of a seasonal high water table is greater than 60 inches. Shrink-swell potential is low. Available water capacity is moderate. The Kf erodibility factor assigned to the top mineral soil layer is .28 and the soil loss tolerance factor T is 3.

Hydrologic group: B

Farmland class: farmland of statewide importance

Hydric soil rating: no

Land capability classification: 3e

Map unit: PaD - Palmyra gravelly loam, 15 to 25 percent slopes

Description category: NASIS

PaD = Palmyra gravelly loam, 15 to 25 percent slopes

This soil is very deep and well drained. The parent material consists of loamy over sandy and gravelly glacioluvial deposits, derived mainly from limestone and other sedimentary rocks. Depth to the top of a seasonal high water table is greater than 60 inches. Shrink-swell potential is low. Available water capacity is moderate. The Kf erodibility factor assigned to the top mineral soil layer is .28 and the soil loss tolerance factor T is 3.

Hydrologic group: B

Farmland class: not prime farmland

Hydric soil rating: no

Land capability classification: 4e

Map unit: W - Water

Description category: NASIS

W = Water

Soil data not provided for this component.

Figure 7. Soil pH Map

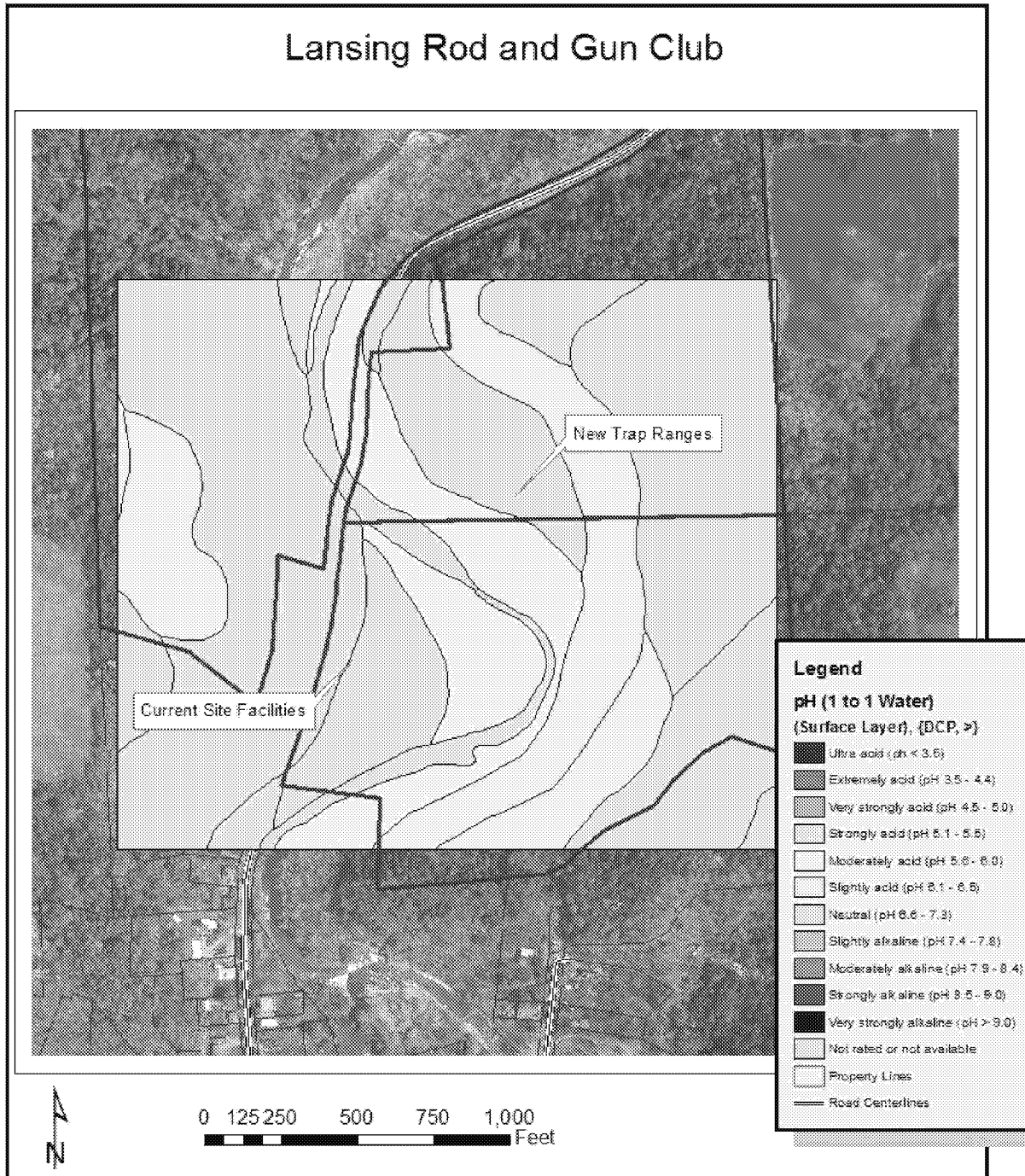
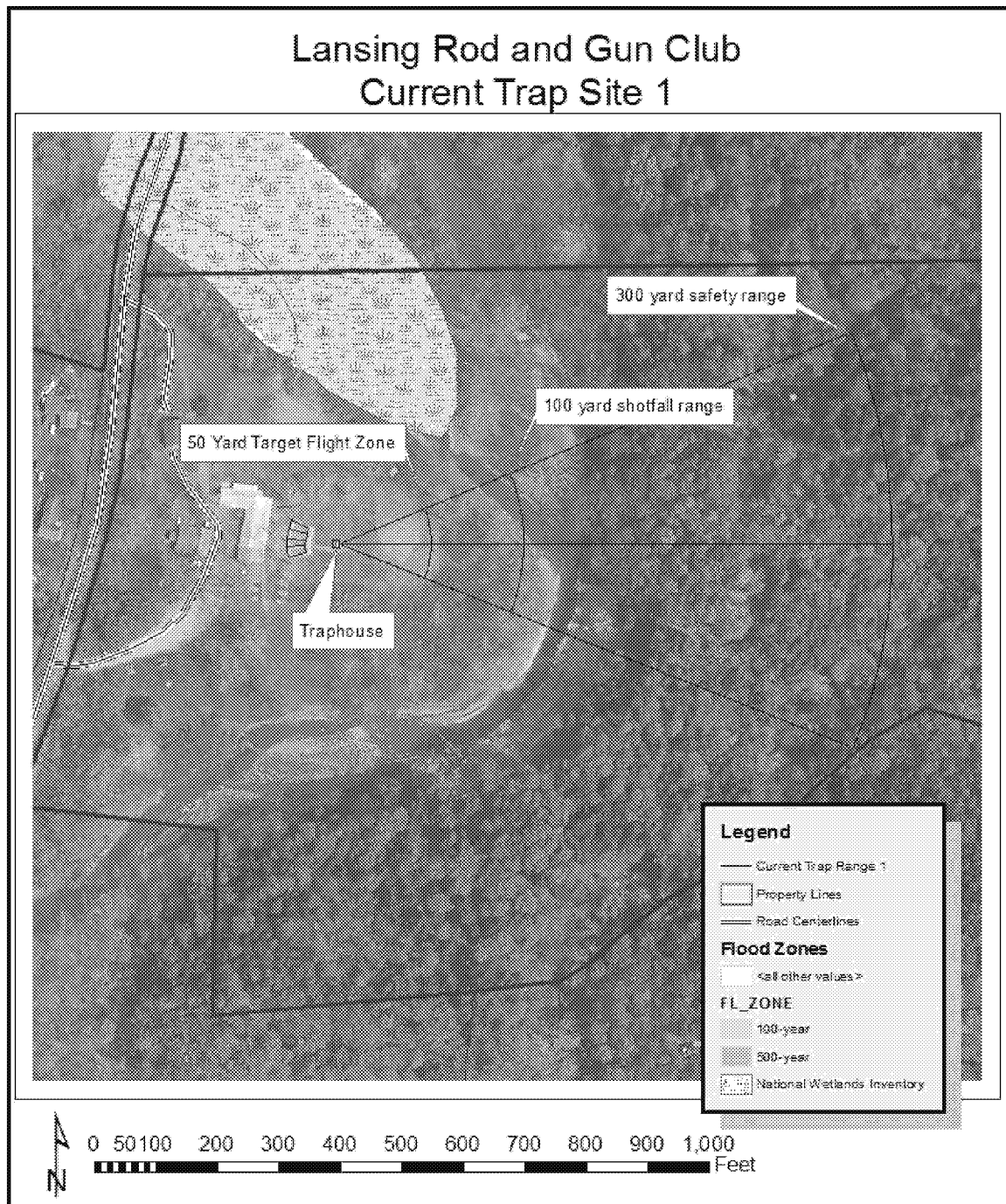


Figure 8. Current Trap Ranges



Lansing Rod and Gun Club Current Trap Site 2

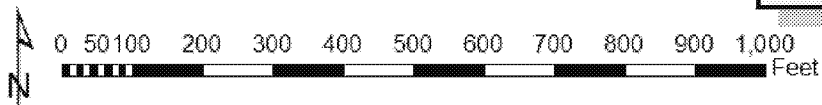
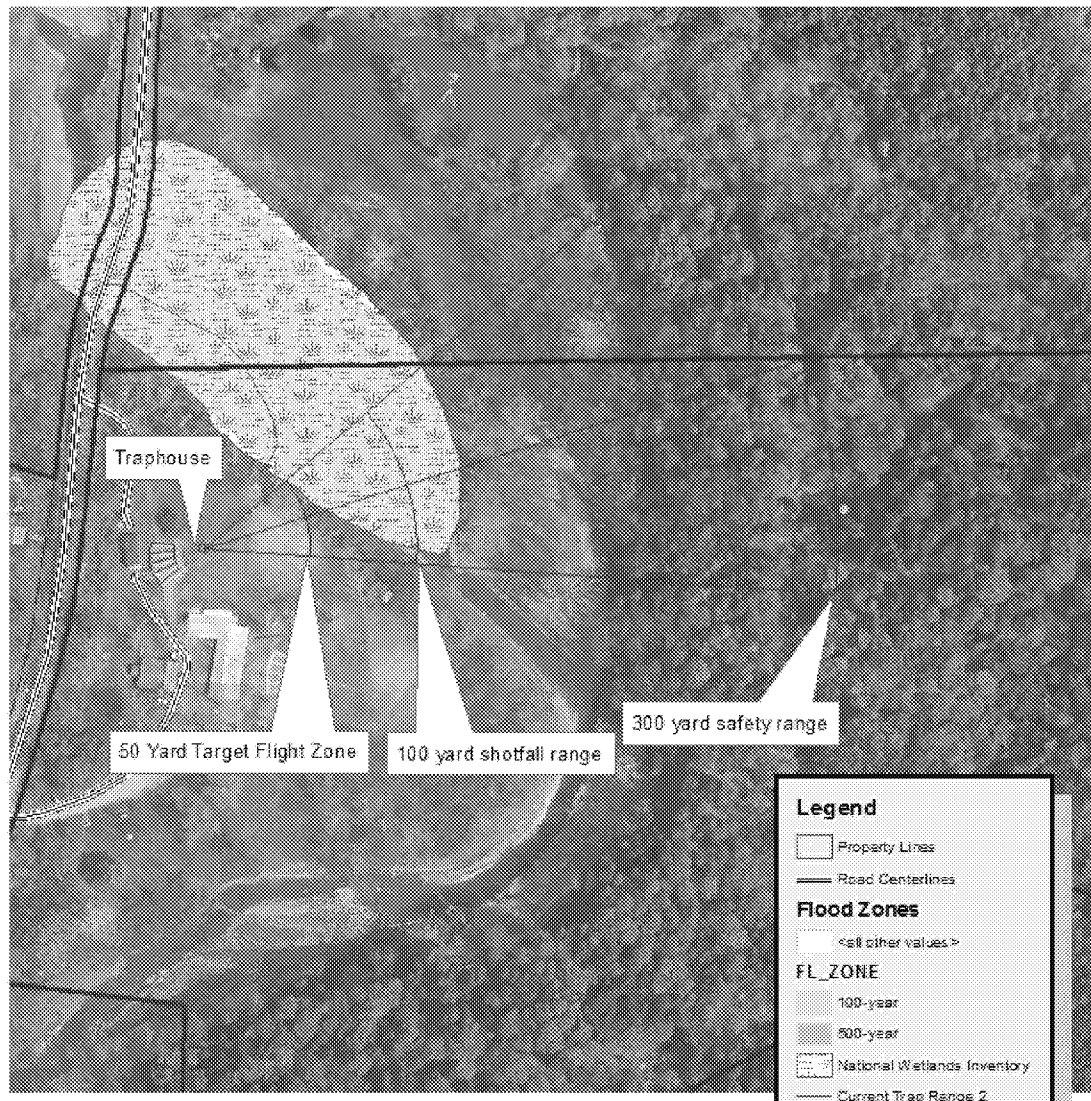


Figure 9. Current Handgun Range

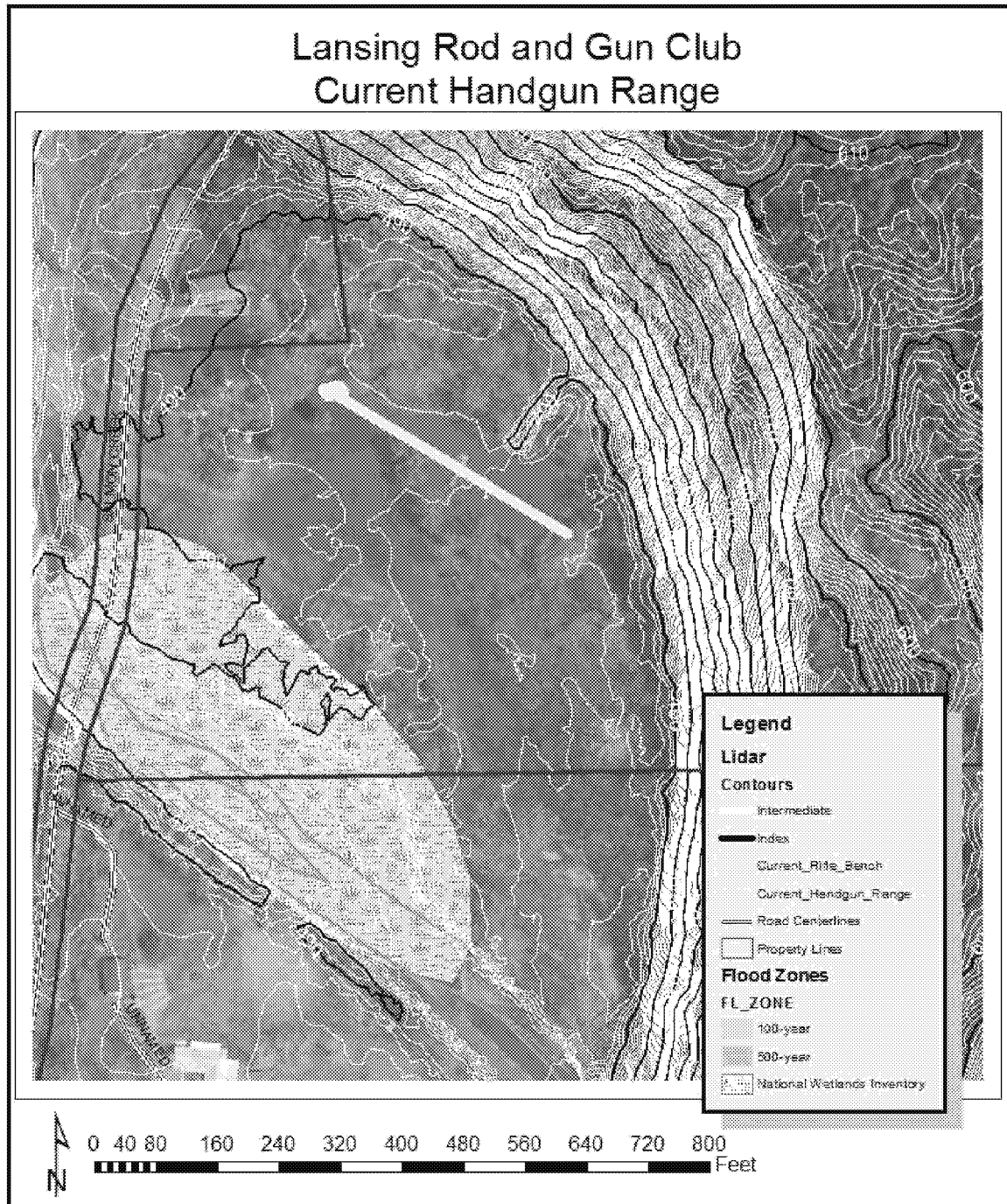


Figure 10. Current Rifle Range

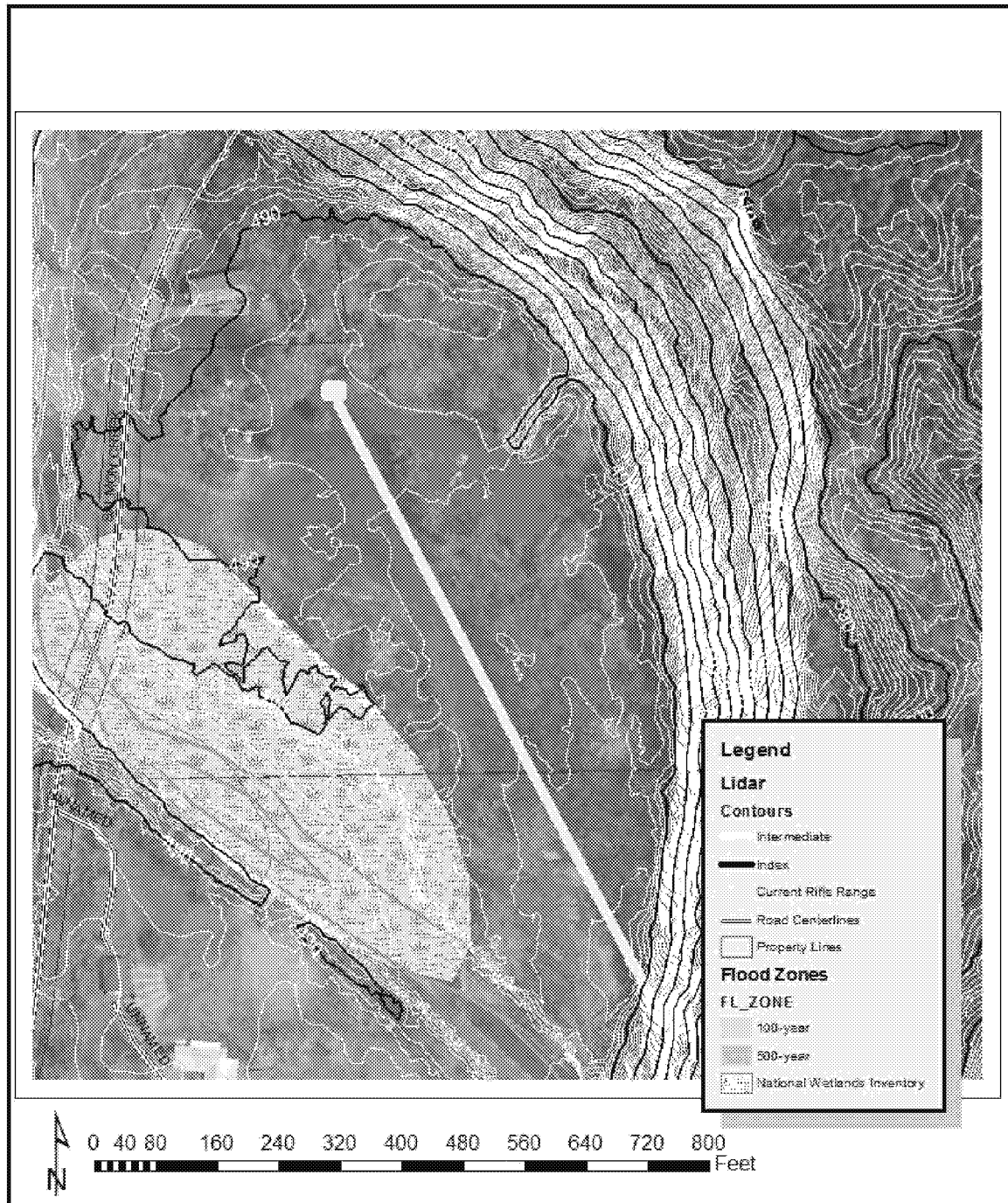


Figure 11. Proposed Trap Ranges

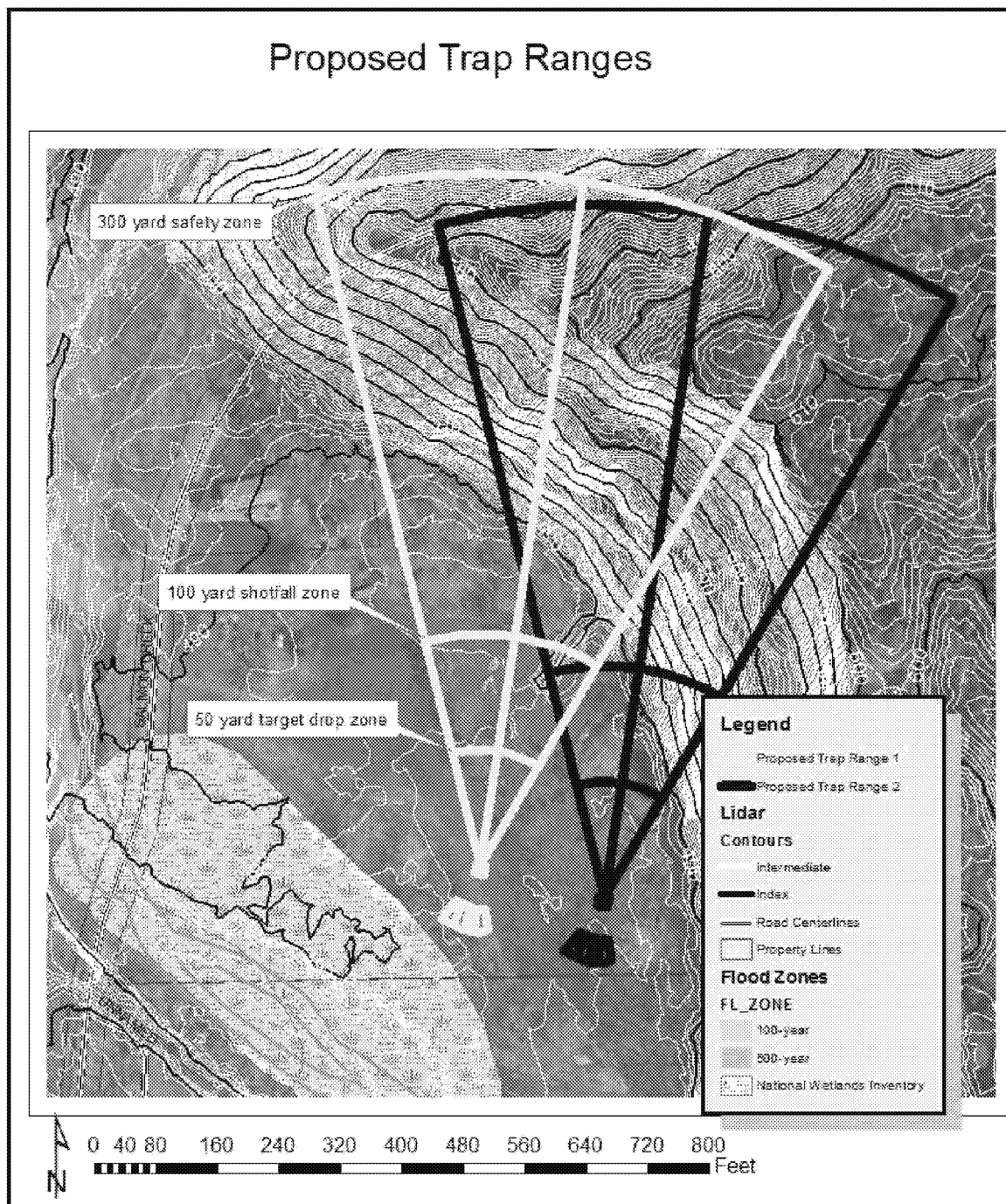


Figure 12. Proposed Handgun Range

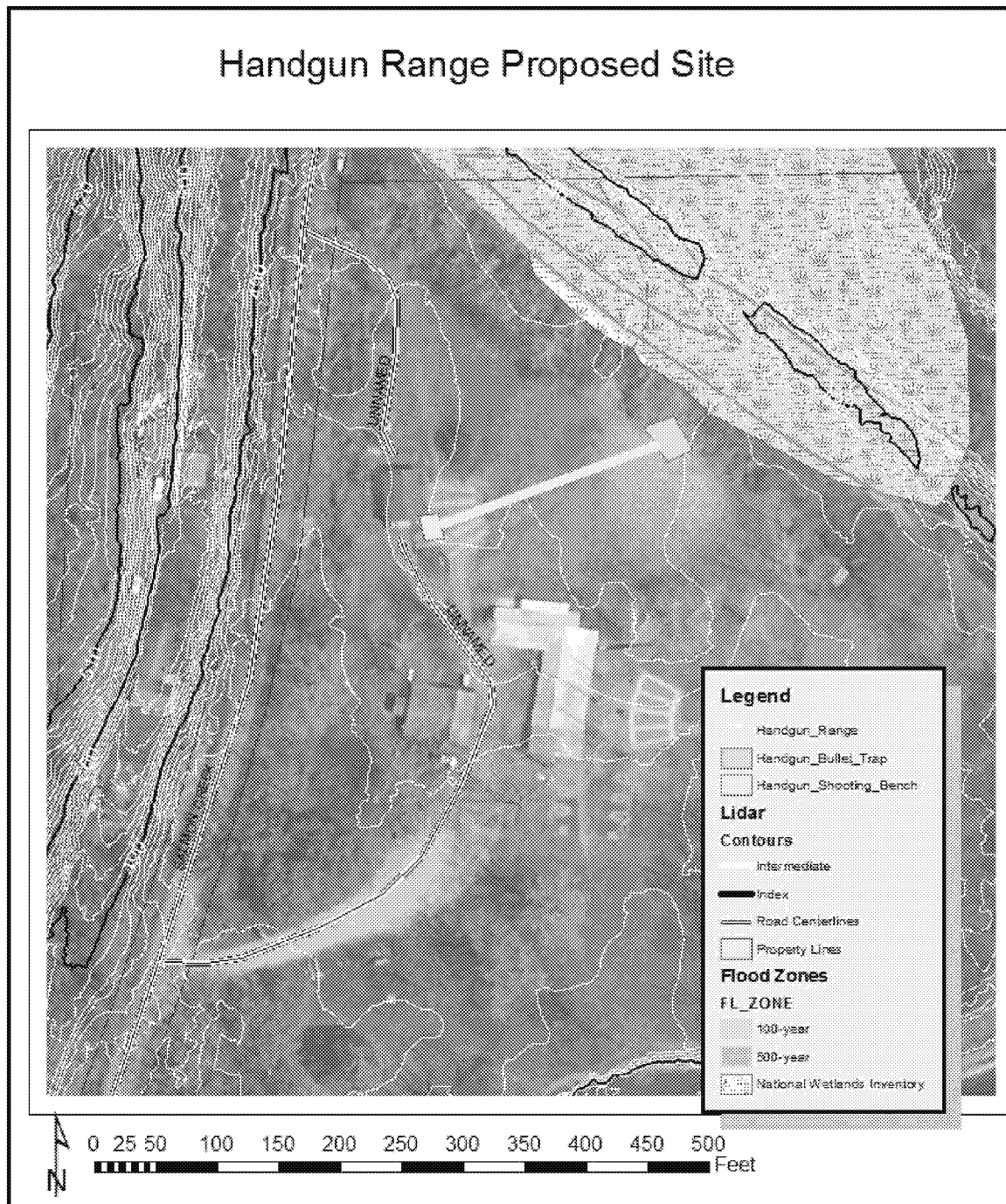


Figure 13. Proposed Rifle Range

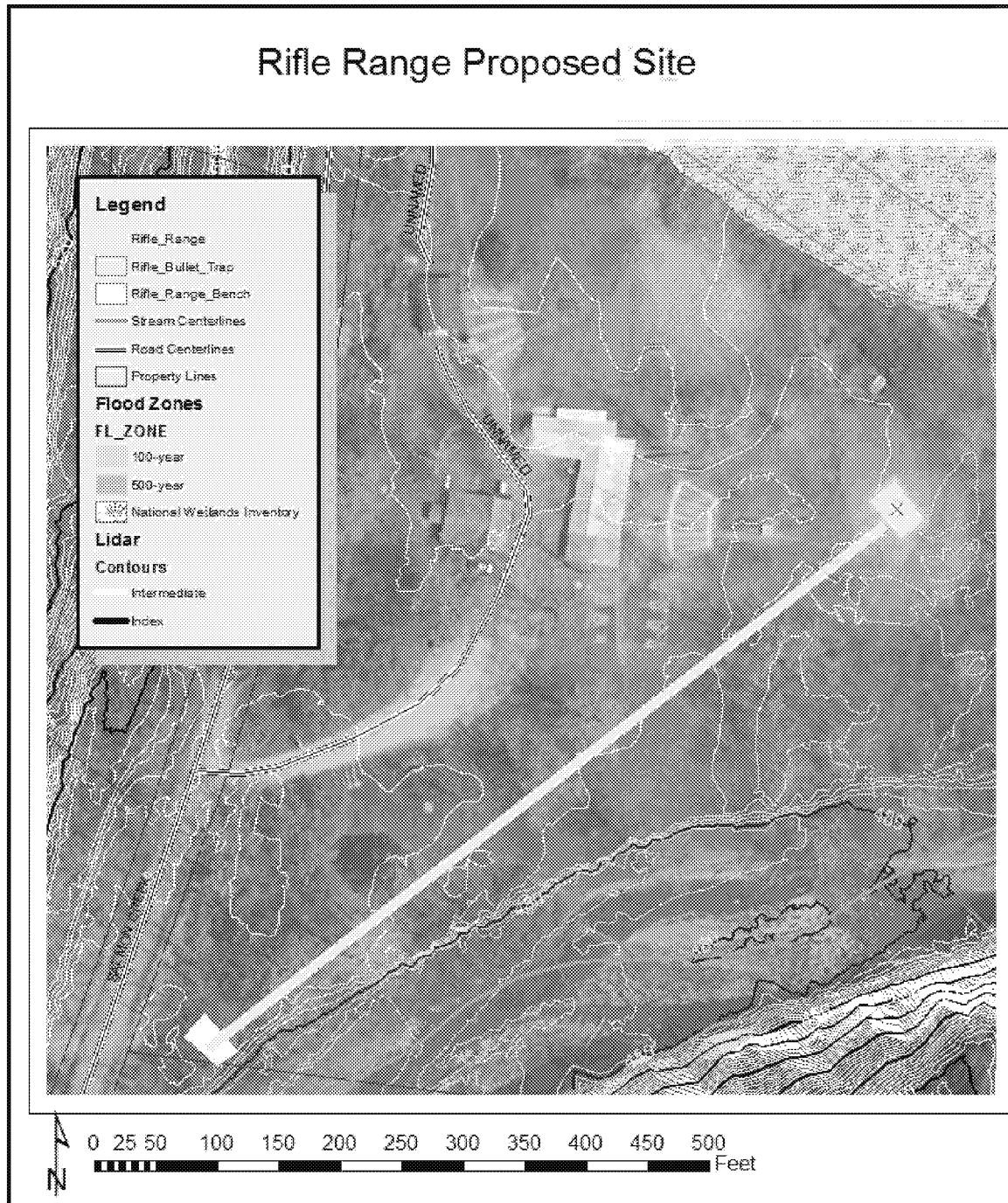
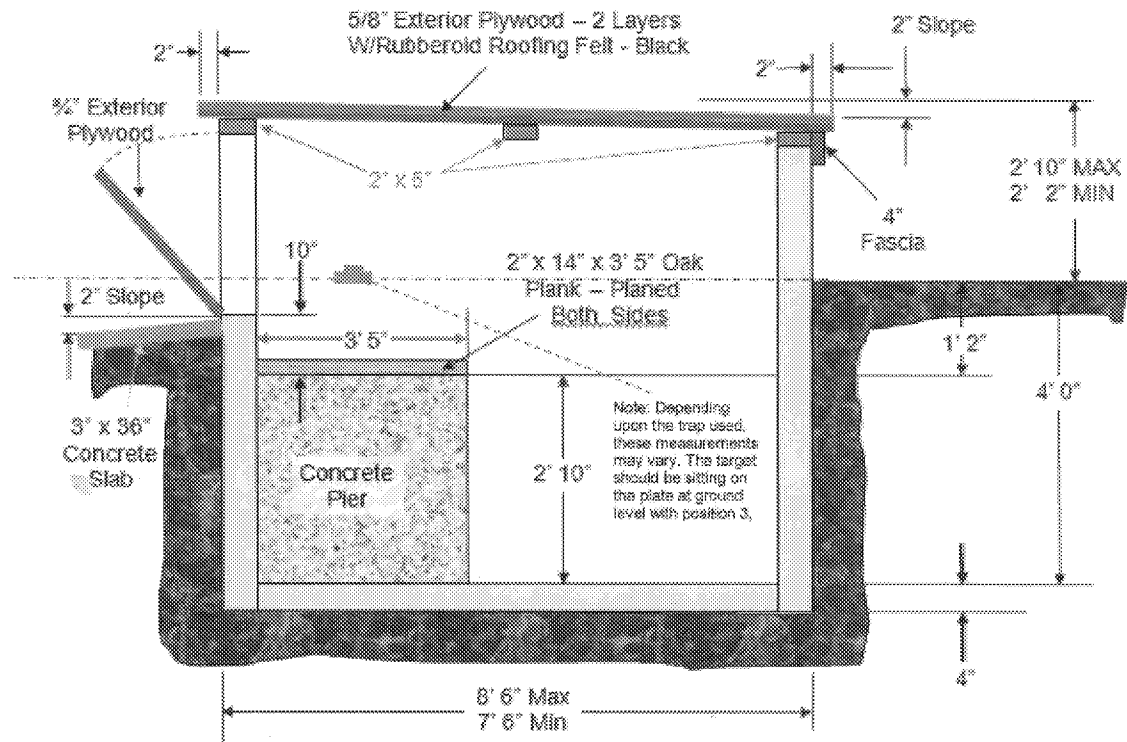


Figure 14. Traphouse Specifications

ATA – Traphouse Specifications



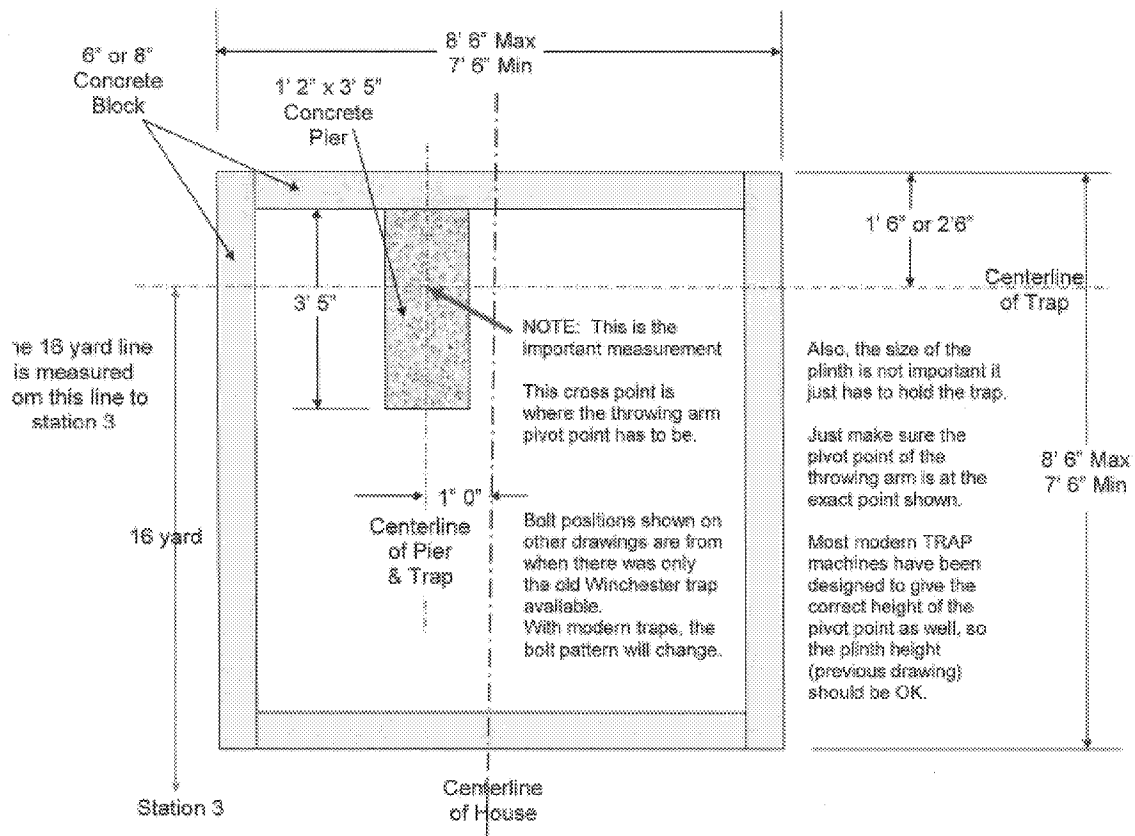
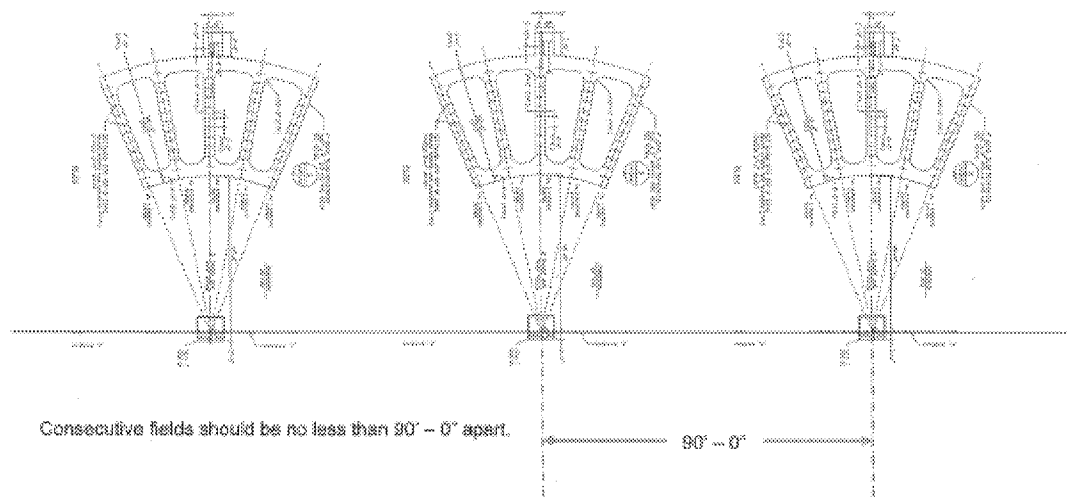
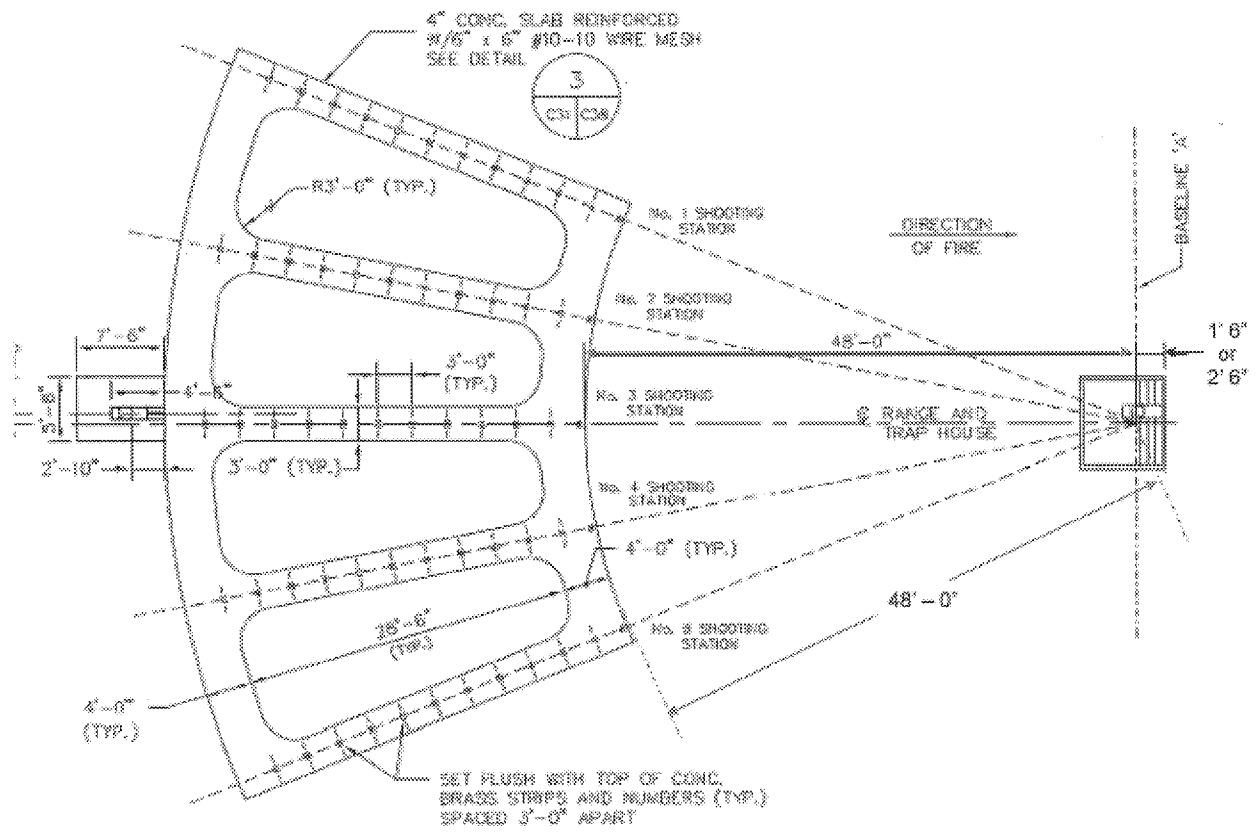


Figure 15. Trap Range Layout Specifications





PLAN

Thanks to NRA Range Manual &
 C. VARGAS & ASSOCIATES, LTD.
 CONSULTING ENGINEERS

Figure 16. Curtain Diagram

